

REMARKS

Claims 1-31 are currently pending. Figure 4 is proposed to be amended as suggested by the Examiner. Applicants respectfully submit that entry of this Amendment is proper because it places the application in condition for allowance, or at least in better form for appeal. The allowance of claims 1-29 and indication of allowable subject matter in claim 31 are acknowledged with appreciation. Reconsideration is respectfully requested.

The Office Action includes an objection to Figure 4. Figure 4 is proposed to be amended to include the legend "Conventional" consistent with the Examiner's suggestion. Withdrawal of the rejection is respectfully requested.

The Office Action includes a rejection of claim 30 as allegedly being anticipated by Figure 4 of the present application. This rejection is respectfully traversed.

In the Amendment of June 20, 2003, Applicants pointed out that the structure illustrated in Figure 4 of the present application has a predetermined depth (G) of the depressions that is equal to the thickness of layer 53b plus twice the thickness of layer 53a, whereas one period of the layer structure is equal to the thickness of layer 53b plus the thickness of layer 53a. Accordingly, it was submitted that the predetermined depth (G) illustrated in Figure 4 is not an integral multiple of one period of the layers, and that the structure recited in claim 30 was distinguishable for at least this reason.

As set forth at page 5 of the Office Action, the Office has disagreed, stating that the language of claim 30 does not require the optical thickness of the predetermined depth to be an integral multiple of one period of the claimed layers.

Applicants are unsure of the meaning of this statement since Applicants have not argued that the predetermined depth or layer thicknesses referred in claim 30 are optical thicknesses (i.e., a physical distance multiplied by an associated index of refraction). In fact, to the contrary, the predetermined depth and layer thicknesses referred to in claim 30 and in Figure 4 are physical dimensions, not optical thicknesses, as is abundantly clear from the specification (see, e.g., page 2, line 16 – page 3, line 8 and page 9, lines 3-20). Accordingly, one of ordinary skill in the art reading claim 30 in light of the specification would readily understand that the predetermined depth and layer thickness recited are physical dimensions, not optical thicknesses.

Thus, Applicants respectfully submit that Figure 4 does not disclose a diffractive optical element as claimed in claim 30. In particular, contrary to the Office's suggestion, Figure 4 does not disclose a structure with a physical predetermined depth of $\lambda/2$ or a physical thickness of one period of layers of $\lambda/2$. Rather, the physical predetermined depth G shown in Figure 4 is $\lambda/2n_0$, and the physical thickness of one period of layers is $\lambda/4n_1 + \lambda/4n_2$. In the structure shown in Figure 4, the physical predetermined depth G (i.e., $\lambda/2n_0$) and the physical layer period (i.e., $\lambda/4n_1 + \lambda/4n_2$) are not equal, because n_0 , n_1 and n_2 are not equal. Accordingly, Figure 4 of the present application does not illustrate a dielectric film comprising a plurality of layers having a physical thickness such that the physical predetermined depth is an integral multiple of one period of the layers as recited in claim 30. Withdrawal of the rejection and allowance of claim 30 are respectfully requested for at least this reason.

If the Office is suggesting, with regard to Figure 4, that the optical path length corresponding to the predetermined depth G is $\lambda/2$, and that the optical path length corresponding to one period of layers 53a and 53b is $\lambda/2$, and that claim 30 reads on such, Applicants respectfully submit that such a position reflects a misinterpretation of the language of claim 30. As discussed above, the predetermined depth and layer thickness referred to in claim 30 are physical dimensions, not optical thicknesses, as would be readily understood by one of ordinary skill in the art. Accordingly, claim 3 is not anticipated by Figure 4 of the present application.

If the Examiner would like to make an Examiner's Amendment to change "thickness" in claim 30 to "physical thickness", Applicants are willing to proceed in that manner in an effort to expedite prosecution and gain allowance of the application. However, for reasons stated above, it is believed that such an amendment is unnecessary. In any event, since such an amendment would merely make explicit what was already implicit, Applicants respectfully submit that such an amendment should not be construed as being related to patentability or as narrowing the scope of the affected claim element.

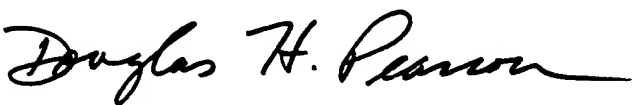
The Office Action also includes an objection to claim 31 as being dependent upon a rejected base claim. Claim 31 is believed to be in condition for allowance since claim 30 is believed to be in condition for allowance as discussed above. Withdrawal of the objection and allowance of claim 31 are respectfully requested.

In light the foregoing, withdrawal of the objections and rejection of record and allowance of this application are respectfully requested. Should any issues remain in connection with the application, the Office is invited to contact the undersigned at the number given below.

Respectfully submitted,

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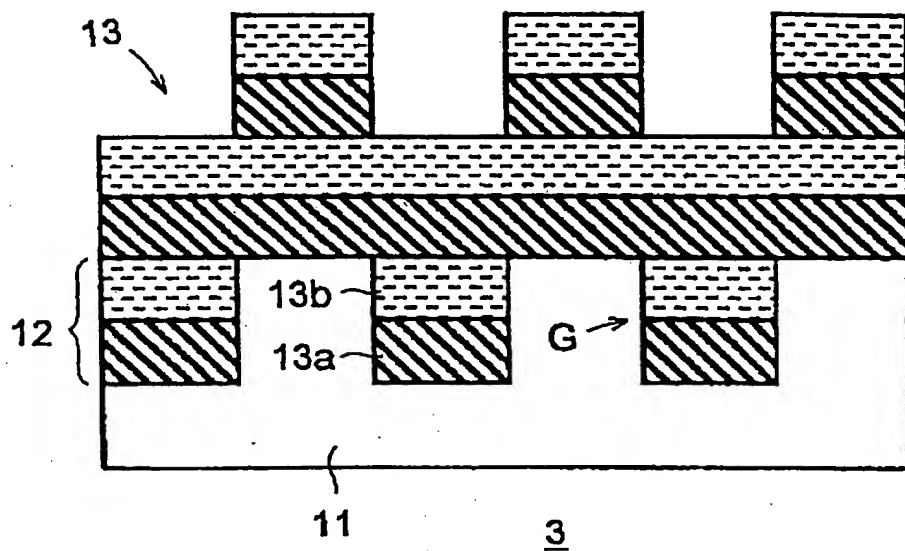
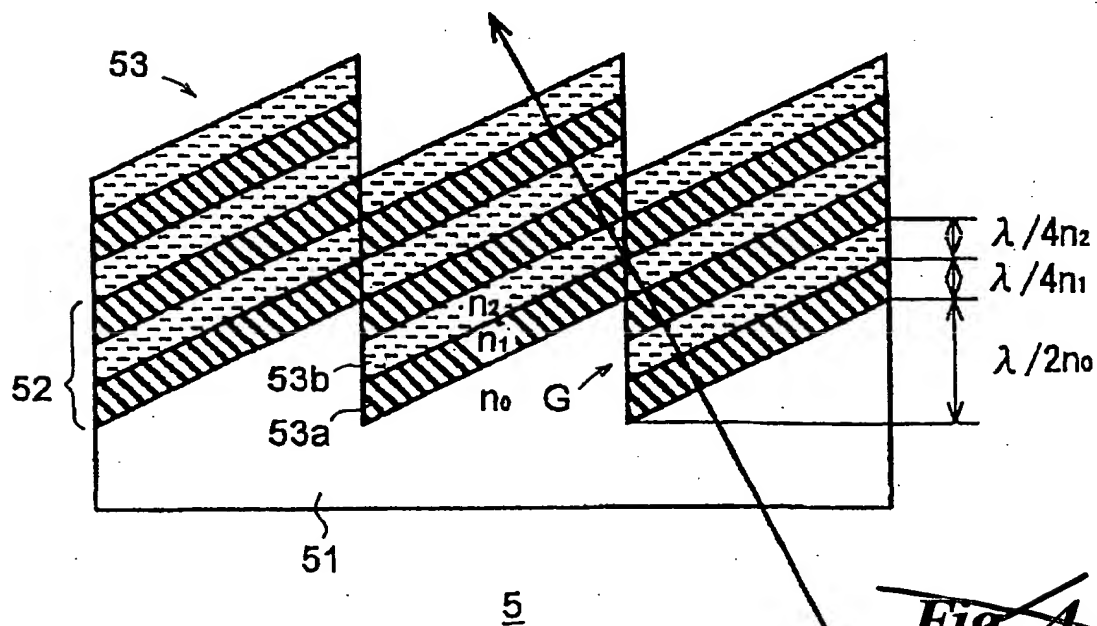


Fig. 3



~~Fig. 4~~

Fig. 4 CONVENTIONAL